

School of Civil and Environmental Engineering

Term I, 2020





COURSE DETAILS					
Units of Credit	6				
Contact hours	6 hours per w	veek			
Class	Monday	10:00-12:00	Sir John Clancy Auditorium (K-C24-G17)		
	Wednesday	14:00-16:00	Sir John Clancy Auditorium (K-C24-G17)		
Workshop	Wednesday	16:00-18:00	Bioscience G07 (K-D26-G07) Electrical Engineering G04 (K-G17-G04) Law Building 389 (K-F8-389) John Goodsell LG19 (K-F20-LG19) Morven Brown G4 (K-C20-G4) John Goodsell LG21 (K-F20-LG21) Ainsworth 201 (K-J17-201) Morven Brown G6 (K-C20-G6) Electrical Engineering G09 (K-G17-G09) Law Building 203 (K-F8-203) Mathews 231 (K-F23-231) Electrical Engineering G10 (K-G17-G10)		
	Wednesday	18:00-20:00	Mathews 231 (K-F23-231)		
Course	Ashish Sharma (AS) email: <u>a.sharma@unsw.edu.au</u>				
Coordinators			<u>.au</u> nvironmental Engineering, Kensington CE307		
	Seokhyeon Kim (SK) email: <u>seokhyeon.kim@unsw.edu.au</u> office: Water Research Centre, Valentine Annexe VA137				
	Mahmood Sadat-Noori (MS) email: <u>m.sadat-noori@unsw.edu.au</u> office: Water Research Laboratory				
Lecturers	Ashish Sharma (AS) email: <u>a.sharma@unsw.edu.au</u> office: School of Civil and Environmental Engineering, Kensington CE307				
	Fiona Johnson (FJ) email: <u>f.johnson@unsw.edu.au</u> office: School of Civil and Environmental Engineering, Kensington CE309				
	Martin Anders email: <u>m.ande</u> office: School	ersen@unsw.e	<u>du.au</u>		

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Lectures

- Find out what you must learn
- Learn more details on the methods and theory that are not covered in the notes
- < Follow worked examples
- Hear announcements on course changes

Week 5	16/03/2020	FJ	IFD relationships, temporal patterns,		
WEER D	18/03/2020		design Floods		

ASSESSMENT OVERVIEW

Generally, the final exam, the mid-semester quiz and the assignments are designed to assess your understanding of the engineering problems and their solutions. These will require you to apply your professional skills to solve the practical problems. More specifically you will be asked to conduct a hydrological assessment of a catchment; quantify the size of design floods; calculate evaporation; and conduct a basic assessment of groundwater resources. The course objectives, content and assessment focus on encouraging the following attributes in you, with particular application to water resources engineering:

- Your understanding of the principles of Water Resources Engineering.
- Capacity for analytical and critical thinking and for creative problem solving. You will be exposed to, and be required to solve, numerous hydrologic problems in the Lectures, the Workshops and the assignments --- "the learning is in the doing". All these problems will cover a variety of scenarios, and where possible, will be drawn from engineering practice.
- Skills for effective communication: Throughout this course, the skills to be developed are in written communication. In your assignments and exams, it is important that you clearly communicate your knowledge.
- Ability to engage independent and reflective learning: By revising the material from the lectures and the workshops you will gain improved skills in independent learning.

Details of each assessment component, the marks assigned to it and the dates of submission are set out below (Note: It generally takes 3 weeks after the due/exam dates for marking results to be released)

ltem	Weight (%)	Learning outcomes assessed	Assessment Criteria	Issue date	Due date
1	Assignments (30%)				
Ass#1: < Water cycle < Engineering hydrology	20%	 Fundamental understanding on hydrology and various components of hydrologic cycle including evaporation Knowledge of applied hydrology to estimate 			

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		techniques used to estimate groundwater resources	 The assessment will broadly be based on their understanding of the subject and answers to the questions asked. Students will be assessed against their understanding of the groundwater and the associated assumptions in applying the theory. 		(to be submitted via Moodle)		
2	Online Quizzes (5%)						
Online Quizzes (Moodle)	5%	 The 5 online quizzes will each contribute 1% of your mark for the subject (i.e. total 5%) These quizzes will give you the opportunity to review your progress in the course as you go You will be given 5 questions for each online quiz taken from a database of questions You will be able to have 2 attempts at each quiz with your higher mark taken 	, , , , , , , , , , , , , , , , , , ,	Weeks 1,2,4,5 and 8	Each quiz will remain open for 1 week		
3	Mid Sem	Mid Semester Quiz (25%)					
Mid Semester Quiz	25%	 The mid semester quiz will be a closed book exam of 90-minute duration It will be held in the workshop rooms This confirms that you are on track and have gained a proper understanding on the basics of hydrology and design practices including revised Australian Rainfall and Runoff Marks will be counted towards the final marks Allowed to bring one A4 sheet of hand-written/printed information Should bring a UNSW approved calculator 	 Students are expected to provide brief and to the point answers to the questions asked A brief discussion on the distribution fitting and 				

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

Program Intended Learning Outcomes